ABSTRACT:

The present invention is a method and apparatus for providing an enhanced automatic drive-thru experience to the customers in a vehicle by allowing use of natural hand gestures to interact with digital content. The invention is named Virtual Touch Ordering System (VTOS). In the VTOS, the virtual touch interaction is defined to be a contact free interaction, in which a user is able to select graphical objects within the digital contents on a display system and is able to control the processes connected to the graphical objects, by natural hand gestures without touching any physical devices, such as a keyboard or a touch screen. Using the virtual touch interaction of the VTOS, the user is able to complete transactions or ordering, without leaving the car and without any physical contact with the display. A plurality of Computer Vision algorithms in the VTOS processes a plurality of input image sequences from the image-capturing system that is pointed at the customers in a vehicle and performs the virtual touch interaction by natural hand gestures. The invention can increase the throughput of drive-thru interaction and reduce the delay in wait time, labor cost, and maintenance cost.